

SOLUTIONS



Montana Department of Transportation



RESEARCH PROGRAM

Fall 2004

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PROJECT HIGHLIGHTS

TRAFFIC NOISE IN MONTANA:

Community Awareness and Recommendations for a Rural State

This research focused on current policies, practices, and procedures for non-traditional noise abatement solutions, solutions that are alternatives to noise barrier walls or berms built by a state department of transportation (DOT). Reviews of the literature and the state of the practice have been conducted on pavement related noise, noise-compatible land use planning, sound insulation, and traffic management techniques. Type II (retrofit) noise barrier programs have also been examined. Finally, a detailed examination of land use planning and development processes and procedures within the State of Montana has been completed, including discussions with a number of local agency planners. This work reveals that because of concerns over growth, many mechanisms are in place that are conducive to the implementation of a noise-compatible planning and development program. Implementation recommendations include:

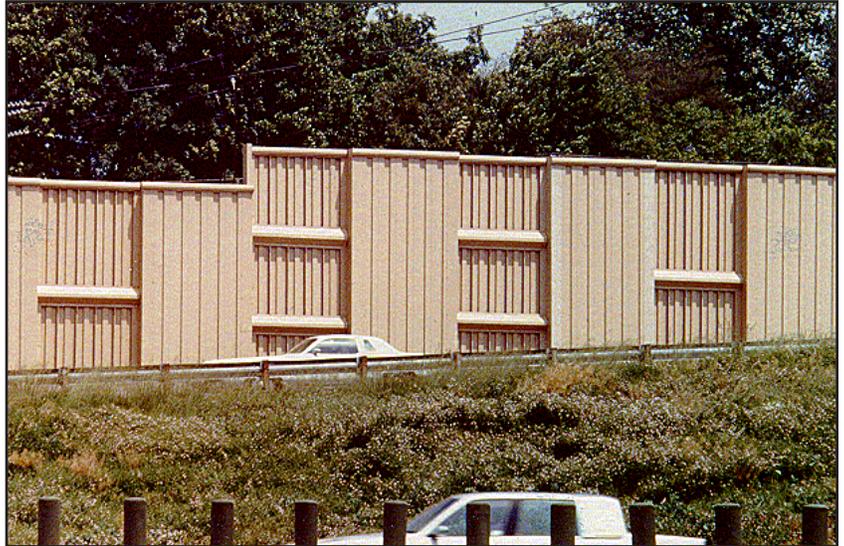
- further investigating the possibility of implementing a Type II noise abatement program. If MDT subsequently decides to pursue a Type II program, it is recommended that a priority system be developed for deciding the order in which neighborhoods should be selected for abatement.
- continuing to take the lead in educating legislators, local decision-makers, planners, developers, builders, and other stakeholders on the problem of traffic noise and the solution of noise-compatible planning and development.
- encouraging local governments to adopt noise-compatible planning and development.
- Promoting such efforts should be considered in conjunction with a change in the MDT traffic noise policy. This change should state that MDT will no longer be responsible for mitigating noise impacts where the local government has allowed adjacent residential development to occur without noise mitigation required of the developer or builder.

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This research has laid excellent groundwork to build upon for noise-compatible planning and development.

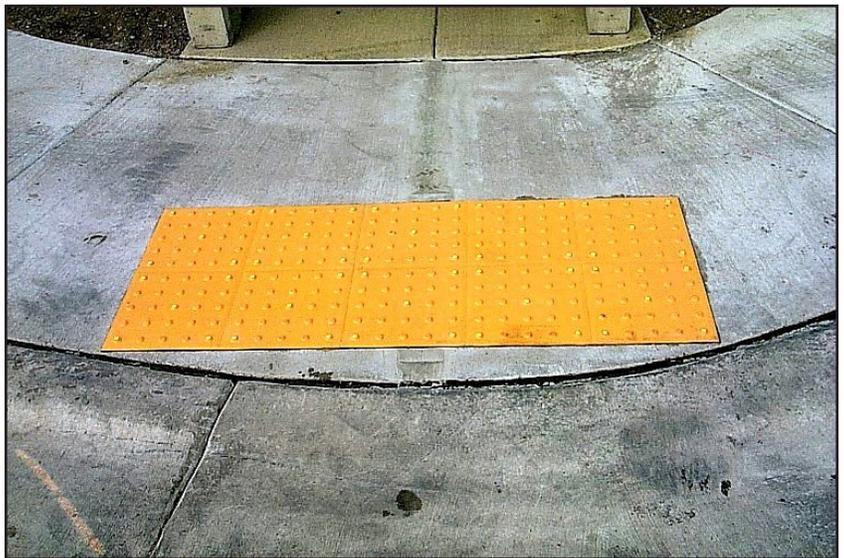
The final report can be found at:
www.mdt.state.mt.us/research/docs/research_proj/noise/final_report.pdf



DETECTABLE WARNING DEVICES (aka: Truncated Domes)

In the fall of 2003, the Great Falls District sponsored an experimental project to test various detectable warning devices (DWD), also know as truncated domes. Truncated domes are used by people with visual disabilities to determine the boundary between the sidewalk and street. These devices allow those individuals to detect the domes before venturing across the street. DWD's are applied directly to the sidewalk ramp as a retrofit, or inserted during construction. MDT is testing seven types of truncated dome installations located at various intersections on 6th St. N.W.

Since the American with Disabilities Act Accessibility Guidelines (ADAAG) determined DWD's to be the acceptable standard, many states have been conducting similar experiments to determine the best product to use. This is of special concern to the northern tier states due to the severity of the winters and the variety of maintenance practices.



at: www.mdt.state.mt.us/research/projects/6th_street.shtml.
The project contact is Craig Abernathy 406-444-6269,
cabernathy@state.mt.us.

The Research office will evaluate these products until the year 2007. All reports to date on this effort can be found



DID YOU KNOW?

The Research Section can help you to try a new technique or material in a construction or maintenance project. Through the Experimental Projects Program, Research staff helps to design appropriate test sections, observes construction, conducts performance evaluations, and publishes construction and performance evaluation reports. Why would you want to evaluate new materials or methods through the Experimental Projects Program?

- Each experimental project results in objective, scientifically defensible data upon which sound decisions can be made.

- Proprietary products can be used only in experimental projects.
- If the experimental project should fail prematurely, FHWA will participate in the fix at the same percent as they participated in the original construction.

To learn more about the Experimental Projects Program, contact Craig Abernathy at 406-444-6269 or visit our website:

www.mdt.state.mt.us/research/projects/exp_overview.shtml.

RESEARCH SOLICITATION

We need your ideas!

The Montana Department of Transportation (MDT) conducts research to discover, develop, or extend knowledge needed to operate, maintain and improve the statewide multimodal transportation system. Specific goals include: evaluation and advancement of new technologies, materials and methods; development of design and analysis techniques; and study of current transportation challenges.

Every year, Research staff solicits for new research topics. Topics can be submitted at any time; however, they will only be considered once a year

and are due by December 31st of each year. New topics are chosen in February of each year and proceed to technical panels, which determine if a research need exists and the most effective and efficient manner in which to conduct the research. Further information and solicitation problem statement forms can be found at www.mdt.state.mt.us/research/unique/solicit.shtml. Information on various past and current research projects can be found at www.mdt.state.mt.us/research/projects/sub_listing.shtml.



LIBRARY CORNER

The MDT libraries are on-line as a part of the Montana Shared Catalog (MSC). The MSC began with 17 libraries in western Montana who joined together to provide their customers a fully integrated, automated, and top-of-the-line library catalog. By the end of the year, this group will have expanded to approximately 50 libraries across the state of Montana. All of these library catalogs are searchable right from your desktop; what a wonderful service available at your fingertips.

Within MDT, the Research, Organizational Development, Civil Rights, Bridge, Aeronautics, Planning, Right-of-Way, Traffic Engineering, and Construction libraries are available through this on-line catalog. Go to www.mdt.state.mt.us/research/unique/services.shtml to search the catalog or view a searching tutorial (learn more about searching the catalog and services). Training on searching the MSC catalog, other transportation catalogs, and various databases is

provided periodically. Currently two training sessions are scheduled for the remainder of 2004: November 4th and December 15th; please contact Sue Sillick at 406-444-7693 or ssillick@state.mt.us to sign up for one of these training sessions.

Watch future newsletter issues for Library Corner articles on searching:

- TRB's Transportation Information Service (TRIS) database
- TRB's Research in Progress (RIP) database
- Transportation Libraries Catalog (TLCat)
- Montana Library Network Group Catalog
- Literature Searches

NEW RESEARCH PROJECTS

Investigation of the Soil Air Voids Test for Use in Compaction Control (www.mdt.state.mt.us/research/projects/mat/airvoids.shtml)

Implementation Plan for Wildlife Mitigation Measures Along Highway 83 in the Seeley-Swan Valley, MT: Animal-Vehicle Collisions and Habitat Connectivity (www.mdt.state.mt.us/research/projects/env/seeley.shtml)

Fish Passage in Montana Culverts - Phase II - Passage Goals (www.mdt.state.mt.us/research/projects/env/fish_passage.shtml)

Warm Water Species Fish Passage in Eastern Montana Culverts (www.mdt.state.mt.us/research/projects/env/fish_passage_warm.shtml)

Effects of Defensive Vehicle Handling Training on Novice Driver Safety: A Case Study in Lewistown, Montana (www.mdt.state.mt.us/research/projects/safety/defensive.shtml)

Ride Specification Review (www.mdt.state.mt.us/research/projects/const/ride_review.shtml)

Determine the Current Rates of Motor Fuel Tax Evasion in Montana (www.mdt.state.mt.us/research/projects/admin/evasion.shtml)

Evaluation And Assessment of the Engineering Characteristics of Rap/Aggregate Blends for Use in Highway Pavement Sections (www.mdt.state.mt.us/research/projects/mat/rap_aggregate.shtml)

A listing of all past and current projects can be found at www.mdt.state.mt.us/research/projects/sub_listing.shtml.



NEW RESEARCH REPORTS

Evaluation of Biodiesel Fuel: Literature Review
(www.mdt.state.mt.us/research/projects/env/biodiesel.shtml)

Air Quality Analysis of MDT Transportation Improvements
(www.mdt.state.mt.us/research/docs/research_proj/air_quality/final_report.pdf)

The Effects of Highways on Small Mammal Populations and
Modification of Crossing Structures to Mitigate such Impacts
– Phase II (www.mdt.state.mt.us/research/projects/env/animal_use.shtml)

Cost Effectiveness of Crack Sealing Materials and Techniques
for Asphalt Pavements (www.mdt.state.mt.us/research/docs/research_proj/crackseal/final_report.pdf)

Traffic Noise in Montana: Community Awareness and
Recommendations for a Rural state (www.mdt.state.mt.us/research/docs/research_proj/noise/final_report.pdf)

A listing of all past and current projects can be found at
www.mdt.state.mt.us/research/projects/sub_listing.shtml.

REMINDER

Information on research services and products, such as research and experimental project processes and reports, and technology transfer services, including our library catalog can be found on the Research web site at www.mdt.state.mt.us/research.

CONTACT US

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